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(54) METHOD AND APPARATUS FOR ULTRASONIC FLAW DETECTION OF SCREW THREAD IN JOINT PART OF PIPE

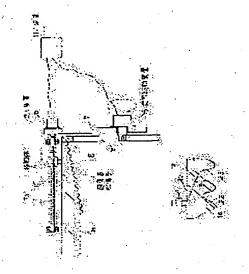
(57) Abstract:

of a defect in the screw threads in the joint part of a pipe by detecting the presence or absence of a reflection echo while spirally moving an ultrasonic probe by directing the emission beam thereof toward the base direction of the screw threads.

CONSTITUTION: The ultrasonic probe 3 is mounted to one end of a moving body 4 screwed to the screw threads 10 so as to come into contact with the surface of the outside cylinder of an internal thread part 1a. A swiveling driving device 5 and a feeder 6 are controlled by an NC (numerical control) device 11. The moving

body 4 is spirally moved on the outside cylindrical surface of the internal thread 1a in such a manner that the emission beam from the orobe 3 moves along the thread base of the internal thread 1a by the cooperative movements of these devices. The mounting

'POSE: To easily and surely detect the presence or absence



position of the probe 3 and the directing direction of the emission beam are previously so determined that the angle θ between the side face 22 of the thread ridge and the incident direction of the emission beam 20 of the probe 3 attains $\leq 80^{\circ}$ ($\geq 10^{\circ}$ inclination in the direction orthogonal with the side face 22 of the thread ridge). The emission beam from the probe 3 reflects at the defect 12 of the thread face and the reflected beam is received by the probe 3, by which said beam is detected as the defect echo.

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